



U.S. Fish and Wildlife Service



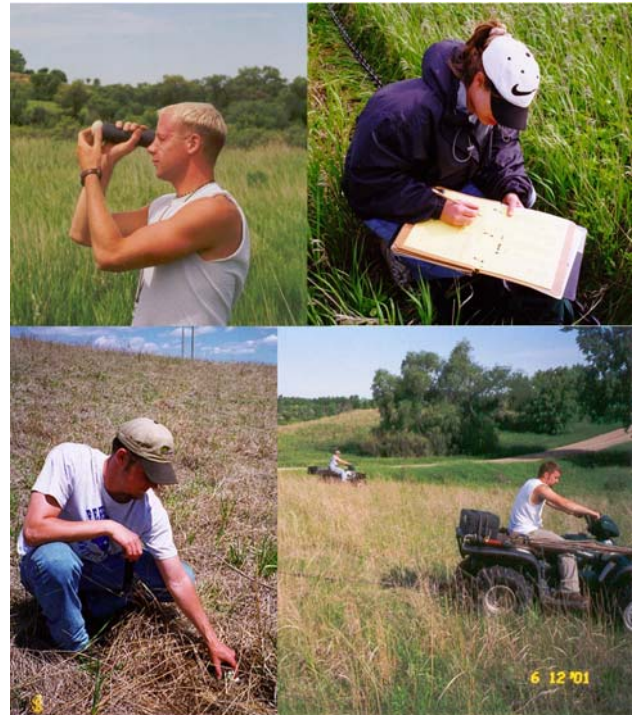
Fact Sheet

Summary of Duck Nest Search Operations 1999 - 2001

Over the last 3 years the US Fish and Wildlife Service HAPET office in cooperation with the Minnesota Waterfowl Association have monitored duck nesting success in west central Minnesota. This study monitored current nesting success rates and evaluated variables in the landscape that may have some impact on duck nest success in western Minnesota. Approximately 12,000 acres were searched over the 3 year period and nearly 1000 duck nests were located. Nest densities were 15 acres per nest, and about 40 acres per successful nest. We found nest densities were higher on federally managed Waterfowl Production Areas (WPA's) than on privately owned Conservation Reserve Program (CRP) fields. However, nesting success was slightly lower on WPA's.

Mallards required taller and denser vegetation than blue-winged teal. Successful nests were in taller and denser cover than unsuccessful nests after early July for mallards and early June for blue-winged teal. Annual variations occurred in vegetation height and density between seeded warm season (WS) grasses and seeded cool season (CS) grasses depending on climatic conditions. Nest abundances were similar in WS grasses and CS grasses. Mallard nest abundances were higher in WS grasses in 1 of 2 years analyzed. Nests success did not vary between in WS grasses when compared to CS grasses. Nest success showed a positive relationship with an increase of grass in the landscape. The relationship between nest success and the amount of grass in the landscape was not strong due to the relationship of other complex and intertwined factors. The shape of the relationship between grass in the landscape and nest success is a complex relationship and may change spatially and temporally.

Due to annual variation in weather conditions and the resulting responses of grass species, a variety of grassland cover types can be beneficial to upland nesting duck species. Duck species responses and productivity may vary between grassland cover types. Seeding rates of cover plantings for nesting waterfowl should be targeted to provide the tallest and densest cover during the spring nesting season (approx. April 15 through June 30). Management should realize the possibility of localized reduction in duck production on treated units and devise burn plans that spatially and temporally disperse burn units across the landscape, thus ensuring that some quality habitat remains within managed landscapes and that population sinks are not created within the landscape.



Landscapes may differ in components such as 1) predator populations, buffer prey species, predator travel corridors, 2) habitat type, size, and shape, 3) edge effects, tree effects, and 4) the amount, type, and dispersal of wetlands.

Therefore, adding equal amounts of cover to differing landscapes may not have equal benefits. Efforts need to be directed to target management practices toward areas where maximum benefits can be achieved. In

order to better manage our public properties for duck production and to maximize the benefits from our acquisition dollars more information is needed on the predator component in the landscape. Increased knowledge of predator interactions with ducks and duck nests as well as interactions with other nest predators may allow land managers to adopt management strategies that have a positive influence on duck production in the Prairie Pothole Region of Minnesota and Iowa.



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